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## THE FORMULA OF SACRIFICE.

### I.

THE philosophical controversy over fate and free-will is still unsettled, and the perplexities of lay people with respect to that question are as yet in no fair way to disappear, but the literature of political economy shows few traces of this long-standing conflict. It is odd that such should be the case; political economy is, in the last analysis, applied psychology—the study of human activities in certain classes of phenomena. Preference, and choice, and desire are the very raw material of the science; and yet, fortunately or unfortunately, political economy has for the most part avoided this ancient controversy. The explanation is perhaps not far to seek. Business men are practical men, and not fatalists. There is too much well-knit every-day sense in business adjustments for the doctrine of no-choice to have gained standing. Economic writers have wholesomely set themselves to translate the experience of business affairs and the ideas of business men into the terms of science. Practical life does not foster fatalistic interpretations. If economists have not all been business men, they have for the most part found their influence and advantage in adopting the business man's point of view. Nevertheless they have been equally far from committing themselves to the free-will theory. Everybody knows (at all events political economists know, or some of them do, or think they do) that political economy is, in a certain sense and in some degree, a science, or is in a way to become so. As such it must adopt the scientific method of treatment. It must deal with laws and construct generalizations. Impliedly it must assume that all things are results of causes, that things are thus because other things were so, and that things having been as they were, things could not now be otherwise than they are. This goes near to surrendering ourselves into the fatalistic camp, but we must go as far as this if we claim to be scientific at all. We need not say

much about it, we need stir up no useless antagonisms, we may do our best to popularize our science, but we must hold loyally to the notion that there is no discontinuity in things, and that causes and results are in quantitative sequence.

Political economy has remained in substantially this attitude of ambiguity ; but the difficulty is not peculiar to economic investigation. Inquirers into any of the mental or moral sciences, for the most part, stick in the same quagmire. In truth, the odd thing is that political economy has got along with so little serious inconvenience in this respect. But we are especially interested to observe that it has done so not by grappling with the difficulty, but by dodging it. We have not gone through, but around. We have been all things to all men. We have assumed, and, at need, we have asserted, the adequacy of causes and the inviolability of law, but all the while we have admitted the freedom of choice and the indeterminate character of human activities. Confronted with the objection that if human thought and choice are outside the field of causation, if they are not necessary results of preceding states, if they are otherwise than inevitable, then there is no place for law in human affairs, no room for generalization, no basis for science, we have answered in effect that this may be true of any particular human being, but that it is not true of a certain hypothetically incarnate ghost whom we have named the abstract or average man. To the objection that a science constructed to house this unreality ought to be, and is, practically as intangible and logically as tenuous as its ghostly inhabitant, we have simply admitted the charge ; but we have urged the necessity of the case, and have pointed out that in the main our conclusions deduced from unreality do somehow approximately coincide with the facts.

The truth is that we need to reconstruct the psychological basis of our science. Political economy is a study of man in his commercial and industrial activities ; man is the center of the science ; his relation to his surroundings can be rightly known only when he, the most important term, is also known. No

easy practicality of method, no indolent avoidance of quasi-philosophical inquiries, no shirking of psychological difficulties will serve. Economics is applied psychology; and we shall make no progress in our investigations by shutting our eyes to this fact.

Nor does a satisfactory basis seem difficult of discovery. We shall be reasonably safe in occupying ground common to all antagonistic philosophical systems. We are familiar in practical experience with the fact that men act under the form of volitions. All schools agree thus far. We need make no question as to whence those volitions spring; at any rate men have them. Men do choose. To this extent at least they are free, that they can and do follow their choice;—in truth they cannot do otherwise as long as choice governs act. It may be that the sheerest sort of fatalism lies back of choice. We are not concerned to explain the origin or the strength of motive; but so far as men are free they follow the strongest motive. It may be that the motives are causeless, undetermined, facts of sheer hazard, but they *are*. Our freedom lies in our ability to follow them. If fatalism holds, character is one term of fate.

From this standpoint political economy is in great part a generalization of the influences which bear upon human choice in industrial and commercial activities. Men follow their preferences. There are outer inducements, temptations, penalties; there are inner appetites, antagonisms of conscience and sympathy, hopes, hates, and fears,—all phases of moral, mental, and physical weakness and strength; but out of the combination of these complex and varying factors results a line of new direction, a line of least resistance, where all the factors concerned are allowed for, that is to say there is a choice. There is nothing very novel or questionable in all this. It may, however, be possible to construct from it a formula for economic reasonings, which shall be at once true to the facts of human nature, applicable to the entire range of human actions, and sufficiently inclusive of the activities which are commonly classed as social and economic.

## II.

The economic formula generally accepted is that proposed by Courcelle-Seneuil : "The satisfaction of our wants with the least possible sum of labor." Jevons approves this formula, but amplifies it : "To satisfy our wants to the utmost with the least effort ;—to procure the greatest amount of what is desirable at the expense of the least that is undesirable ;—in other words, to maximize pleasure is the problem of economics."

But while it is true that men occasionally work for the pleasure of working, they more commonly work to avoid the pain of unsatisfied wants. Not the pleasure of eating, or the pride of adornment, but the dread of hunger and exposure is the main incentive to labor. To most men the question is one of comparison between the irksomeness of effort and the irksomeness of unsatisfied desires ; and to all men the question comes to this case if labor be sufficiently prolonged. The desires of man outrun his performance. He ceases to labor not because he covets no more of labor's rewards, but because the pain of continuance is greater than that of unsatisfied desire. Desires become less intense with partial satisfaction, and labor, even if pleasurable in the beginning, passes the line of pain if long continued.

For most purposes, then, it would seem preferable to state the problem of economics as the minimizing of pain rather than as the maximizing of pleasure. Still, some provision must be made for the case of the man who works for the pleasure of working, and stops with the cessation of pleasure, or of the man who chooses, as between two lines of agreeable work, that kind of work which is for him the more agreeable. The economic formula must be wide enough to cover these cases. There are possibly as many men who prefer work without reward as there are men who prefer idleness to any of the rewards of work. It is to be added that this pleasurable labor is not to be classed, for theoretical purposes, with play. Though the activity may be enjoyable, yet if its aim is the creation of utility, and it is performed not simply for the pleasure of performance but in some

measure with a view to the resulting product, it must be classed as work.

But there is a formula which is wide enough to cover all of these cases, and which is yet serviceable. Economic activity, whether of the pleasurable or the painful sort, may be stated in terms of sacrifice. For the man who works because he finds work pleasant, it would be a sacrifice to refrain from work; he chooses that line of work which he prefers in view both of the pleasures of activity and of the accompanying compensations in productiveness. He ceases to work at the point where continuance would be a sacrifice. The man to whom all effort is irksome chooses that line of activity which in view both of the quality of the work and of its compensation involves the smallest sacrifice. For him who prefers idleness to activity, activity would mean the larger sacrifice.

The economic problem can accordingly be stated as the minimizing of sacrifice. This formula includes not only all the phenomena commonly regarded as belonging to economic science, but also many classes of phenomena not ordinarily so regarded, and it dispenses with the distorted abstractions of "discommodity," "disutility," and "negative utility." The underlying law of economics is thus found to be identical with the primary law of metaphysics, physics, and sociology, viz., that force follows the line of least resistance.

### III.

It remains briefly to suggest some of the re-statements of economic doctrine necessitated by the adoption of this formula of sacrifice.

At the outset it offers a clear line of demarkation between the notions of wealth and of value. Holding clearly in mind that in the economic relation there are the two terms—man and environment, we may say in brief that all that which is not man, and still is useful to man, is wealth, as viewed from the standpoint of society as a whole. Mental or physical endowment is not wealth. It is a part of man's equipment for the purposes of

life, as are legs, and eyes, and stomach. Utilities external to man are social wealth. They are the objects of desire, they furnish service, afford satisfaction or protect from discomfort; if sacrifice were a condition to their enjoyment they would command sacrifice. The quality of usefulness is the measure of desirability.

This manner of statement, if correct, requires a change in the point of view for economic reasoning; the field of investigation must be re-surveyed. Economics, as an art, is the application of economic principles to the well-being of society. Our concern is, therefore, not merely with wealth in the sense of material valuable things, nor simply with any aggregate of valuables, material and immaterial, but with utilities. It is true that the difficult questions of Political Economy for most part range themselves about the concept of value, and that in questions of distribution, doctrines of value are all-important. But this is only another statement of the fact that value emerges in human life only where obstacles and difficulties are found in the path of enjoyment, where satisfactions are saddled with deductions, where needs impell to burdensome effort. Value is an expression of the niggardliness of nature—of resistance to be overcome—of the disparity between man's desires and his opportunities—of the necessity which rests upon him for sacrifice. Economic progress expresses itself in successive reductions of the sacrifices necessary to the satisfaction of desire, in the approach of commodities to the margin where value disappears,—in short, in the cheapening of things. Human interests are not in parallel with value, but in antagonism. Commerce constantly affords verifications of this truth. The destruction of the shipload of spices has become a classical example. The progress of monopoly is a series of illustrations. A short crop commonly sells for a greater aggregate price than an abundant crop. Human weal, social welfare, is out of harmony with the current concept of wealth. That water should become so scarce as to command a high market price would mean that society had not grown richer but poorer. Value measures sacrifice and not well-

being. We are richer in our rain-falls, than in our irrigation ditches.

Value, then, is the measure of the quantity of sacrifice involved in obtaining utility. Market value is the measure of this sacrifice as determined by market adjustments. It is unnecessary to enter into a detailed analysis of the process of adjustment, but it is evident that market value is an outcome of differing individual estimates of relative utility. Exchange results from the fact that each of two persons is disposed to forego the utility of that which is in hand in order to obtain that which is not in hand. Evidently, for all purchasers other than the marginal purchaser, value furnishes no measure of utility. For all others the commodity would command a higher price were the higher price demanded. Nor is the value at the margin a measure of absolute utility, but of relative utility only. The poor man foregoes what the rich man will purchase, not because the absolute utility to the poor man is less than to the rich, but simply because the relative utility is less to him. The phrase "marginal relative utility" is equivalent to marginal sacrifice. A given case is marginal, simply because the utility gained and the utility sacrificed are in that case approximately equal.

The sacrifice formula permits, even if it does not compel, a re-statement of the doctrine of the cost of production. Production may be viewed as a purchase of utility from nature at the price of effort. This manner of statement does not imply adherence to the doctrine that labor affords the ultimate basis or measure of value. Undoubtedly, that which may be had at will and without effort has no value; but desires and needs are the motive force behind labor. It is true that if Crusoe had desired but one thing the amount of effort-sacrifice consented to by him in order to obtain that thing would have measured its value in the individual estimate (subjective value). But effort is only one form of sacrifice; the labor formula for value applies only where there is a choosing between the irksomeness of labor and the irksomeness of unsatisfied want. If the choice lies between the production or purchase of two commodities, the



value of one is measured by the sacrifice of going without the other. Choice commonly lies between different occupations and not between a single occupation and idleness. It is, therefore, incorrect to measure value in terms of labor—of the sacrifice of ease. In one case the greater sacrifice may be of ease, and in another of the utilities possibly obtainable through the application of the same productive energies in another direction. The labor measure of value commonly means nothing, unless it is taken to suggest the different productive possibilities in the application of labor. In the last analysis it is not the labor itself but its product that satisfies desire and therefore commands sacrifice.

This reasoning is equally applicable to land and capital. Only with a view to possible remuneration in other applications, or to alternative opportunities in other markets can rent, wages, or interest be said to enter into cost of production, or the term cost of production be said to indicate, from other than the individual point of view, any ultimate fact or principle.

And even from the point of view of the individual the cost-of-production formula is not exhaustive. Unless the term "cost" is interpreted to mean sacrifice, the doctrine is inadequate. It is doubtless correct enough, as far as it goes, to say that market prices must, in the ideal scheme, stand at the cost price of the most expensive portion of the market supply, since if price falls, the marginal producer will cease production, but it remains to ask why this producer ceases production when price falls. The fact is commonly not that market conditions afford him no remuneration in this line of production, but that greater remunerations are possible elsewhere. A very low remuneration would suffice if the alternative were an absence of all remuneration; the producer ceases production not because the cost of production is too high absolutely, but because it is too high relatively. His line of least sacrifice is the line of change. It needs only to suggest the bearing of this reasoning upon the question of protective tariffs.

But even under the interpretation of the sacrifice doctrine

the cost-of-production formula is open to the objection that it states as the ultimate cause of value that which in its nature is entirely subordinate and secondary. Utility is the primary cause of value ; sacrifice is merely a condition. Needs and desires, not sacrifices and costs, are the basis of utility. Utility furnishes the motive to sacrifice, while value is the measure of the sacrifice. Demand controls supply, and supply adjusts itself to demand as expressed in market values. Producers in any line will continue to produce so long as the remunerations afforded by current market values in the line of activity chosen exceed the resulting sacrifice of values obtainable in other lines. Differing degrees of advantage, in different industries, for different producers, induce a constant change in the application of productive energies.

But a change in activity is not the cause of the existing values, though it may affect them. Men adapt their productive activities to price conditions as the market has determined them, but not with any hope of fixing prices (except in cases of monopoly), and never with any idea of determining price by cost of production. The problem is always to adjust cost of production to price, never price to cost of production. Changes in value modify supply, and changes in supply, resulting from changes in value, in turn modify value ; but demand is the motive force behind supply, and expresses itself as motive force in terms of value. In practical affairs producers as an aggregate and producers individually comport themselves in full harmony with this theoretical fact, and in complete recognition of it. To explain production in terms of the cost-of-production doctrine violates the facts, or else it means nothing. To explain values under that formula is to emphasize the secondary factor in the equation, to the exclusion of the primary factor. Value is a resultant from the forces of demand and supply, supply being itself a resultant from demand. Sacrifices of production are important only as modifying the supply term. Prices rise whenever demand tends to raise them, unless counter-acting tendencies in the volume of supply are thereby set up.

We have seen that for producers, other than the marginal producer, value furnishes no measure of utility; that a higher price would be paid were the satisfaction of desire conditioned upon a higher payment. It is equally true that for all sellers, other than the marginal seller, there is a seller's surplus. Likewise there is for producers, whether wage-earners or employers, a rent element in the remunerations received. No change in productive activity can follow a reduction in remuneration so long as sacrifices do not exceed rewards. Evidently, too, there is, for all other than marginal renters and borrowers (and for lenders and landlords) a surplus of advantage secured from the hiring or renting process. All these are cases of differential advantage, of quasi-rent, of distance from the margin of sacrifice. But it must especially be noted that in most cases renter's or borrower's surplus appears in the form of producer's quasi-rent, and is included in the quantity termed ability-rent, which, in turn, appears as one element of wages or profits. This rent element in wages and profits measures a special advantage, sentimental or pecuniary, in the line of activity chosen, over the remuneration possible through any other application of the same productive energies. It is a case of surplus over sacrifice. Differential advantage means nothing else than surplus over sacrifice.

It is of interest to note the bearing of the sacrifice formula upon the theoretical aspects of monopolies and taxation. Marginal sacrifices can in no case be increased, but for all interests above the margin, whether of buyers, sellers, lenders, borrowers, producers or consumers, there is a surplus, a remainder which, so long as it is not exhausted, may be encroached upon indefinitely without changing the line of lowest-motive resistance, and it therefore offers to the monopolist and the tax-gatherer the widest opportunity for skilful appropriation. And it follows also, from the nature of rent, that a tax on any form of it cannot be shifted unless the tax is more than the rent, or its burden touches the margin where rent vanishes. Were it within the ingenuity of legislators to so adjust the taxes in all cases as to

fraction of tribute to the landlord. If by reason of withdrawal for hunting, park or forestry, large deductions are made from the lands devoted to the production of food products, higher prices and higher rents must result. Some part of the increased rents will, in final incidence, rest upon tenants, and some part upon consumers of product. Combination among landlords, or monopoly ownership, might work the same results. Monopoly rents must modify prices if they work a changed relation between demand and supply of products. If the tenants' burdens are increased a changed relation must result, with a new marginal alignment of sacrifices at higher prices and with fewer producers and lessened product and with a reduced aggregate of producers and consumers rents. *Competitive rents do not add to price; they do not work these new adjustments, but result from them.*

Land commands a price for precisely the same reason as capital or labor. Prices go to higher levels when demand tends to carry them there and counteracting tendencies in the volume of supply are not set up. Land-owners get their distributive-competitive shares for precisely the same reason as do tool-owners. But tools may be multiplied, while land can not. Where land is all utilized, an adjustment of supply to demand will take place by a rise in the market price of products. From this rise in prices the land-owner gets a profit in the form of increased rents; but this increase is the effect, not the cause of the rise in prices.

It now remains to state, in conformity with our formula, the doctrine of normal price and normal value. Thus far we have found no occasion to interest ourselves in average or ideal or hypothetical men, nor, indeed, with averages of any sort. Nor shall we find it worth while to assume the general selfishness of humanity, nor the general disposition to follow, within or without the domain of morals, the line of maximum rewards or maximum compensations of any sort. Room is left under our formula for prejudice, sentiment, philanthropy, love, hate, weakness, laziness and stupidity. From whatever causes men act, within or without the range of economic phenomena, their course of action is their line of least resistance. We emphasize

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the necessity of regarding man as the subject and the central point of economic science, his environment as his opportunity, his industrial product as one factor in his remuneration, his economic activity as his attempt to produce and distribute this product along the line of least sacrifice.

Normal price is then to be regarded as the line of least sacrifice, not only for all buyers and sellers directly engaged in any market, but also for all producers and purchasers standing in indirect relation to it. Market prices are found to fluctuate about this normal or ideal price, and cannot, in the competitive adjustment of sacrifice, long or widely depart from this norm. Fluctuations are the manifestations of changes, which may take place in the environment, that is, in climate, in the fertility of the soil, the productiveness of forests, mines, streams, seas, etc., or they may take place in the human factor, in changes of taste, desire, energy, and knowledge. Like the ocean, market values have no rest, but in ripple, or wave, or breaking, are always tied to an ideal level, to the controlling power of which crest and trough equally bear witness. Economic forces are tendencies to conformity with a moving equilibrium whose energy is the expression of human demands. Values generally will stand at their normal level if no producer or consumer thinks he can change his manner of economic activity without an increase of sacrifice.

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